

CLAIMS

1. An interactive communication system enabling a lay person to communicate operating symptoms of equipment to skilled service personnel, to enable said service personnel to thereafter perform service on said equipment in accordance with said operating symptoms, comprising:

5 a sensor array associated with said equipment;

said sensor array providing a plurality of outputs indicative of a plurality of operating symptoms of said equipment that occur as said lay person operates said equipment;

memory means associated with said equipment;

10 first control means responsive to an action by said lay person;

actuation of said first control means operating to cause said plurality of outputs of said sensor array to be stored in said memory means when said lay person actuates said first control means in response to said lay person experiencing an abnormal mode of operation of said equipment;

15 a query generator at a service site for generating a symptom-related query;

a presentation device for receiving said symptom-related query and for presenting said symptom-related query to said lay person;

20 second control means responsive to an action by said lay person in response to said symptom-related query; and

said second control means being operable to provide a content of said memory means to said service site for analysis by said service personnel.

2. The interactive communication system of claim 1 wherein said service site and said equipment are located at geographically remote sites and wherein the Internet is utilized to send said symptom-related query and said content of said memory means.

5 5. A method enabling a lay person at an equipment site to communicate operating symptoms of equipment to skilled service personnel at a service site to thereby enable said service personnel to thereafter perform service on said equipment based upon said operating symptoms, comprising the steps of.

 providing a sensor array on said equipment;

 said sensor array providing a plurality of outputs that are indicative of a plurality of operating symptoms of said equipment that occur as said lay person operates said equipment;

10 providing memory means on said equipment;

 providing first control means on said equipment responsive to an action by said lay person as said lay person operates said equipment;

 actuation of said first control means causing said plurality of outputs of said sensor array to be stored in said memory means at a time when said lay person actuates said first control means in response to said lay person experiencing an abnormal mode of operation of said equipment;

 providing a query generator at a service site for generating a symptom-related query to said equipment site;

20 providing a presentation device at said equipment site for receiving said symptom-related query and for presenting said symptom-related query to said lay person;

 providing second control means responsive to actuation by said lay person in response to said symptom-related query; and

25 providing a content of said memory means to said service site for analysis by said service personnel in response to actuation of said second control means

9. An Internet-based system for providing interactive communication between a plurality of service sites and a plurality of equipment sites at which a plurality of equipment needing service is operated by an equipment operator comprising:

5 a sensor array, memory and a manual actuator at each of said plurality of equipment;

actuation of said actuator by an equipment operator when an abnormal mode of operation of a given equipment at a corresponding equipment site is experienced causing equipment operating conditions sensed by said sensor
10 array be to stored in said memory of said given equipment;

first means at said corresponding equipment site for causing a request for service to be sent via the Internet from said corresponding equipment site to a selected service site;

query means at said selected service site responsive to said request for
15 service for sending a symptom query via the Internet from said selected service site to said corresponding equipment site;

second means at said corresponding equipment site responsive to said symptom query for sending a content of said memory of said given equipment via the Internet from said corresponding equipment site to said selected
20 service site, and

a compiler at said given service site responsive to said content of said memory of said given equipment for providing a service plan based upon said content of said memory of said given equipment.

10. The system of claim 9 wherein said plurality of service sites are a plurality of automobile service sites, and wherein said plurality of equipment are a plurality of automobiles.

11. A method allowing a lay person to submit symptoms relating to a malfunction of equipment, and allowing a service provider to generate a chart of symptoms for use in servicing said equipment, comprising the steps of

- 5 providing a sensor array having a plurality of outputs corresponding to a plurality of operating symptoms of said equipment;
- providing memory on said equipment;
- providing an actuator on said equipment;
- instantaneous operation of said actuator causing instantaneous values
- 10 of said plurality of outputs of said sensor array to be stored in said memory;
- initially a request for service to said service provider by said lay person;
- in response to said request, querying said lay person for operating symptoms of said equipment by said service provider,
- 15 in response to said query, providing a content of said memory to said service provider by said lay person;
- in response to receiving said content of said memory, compiling said content of said memory at said service provider; and
- outputting a chart of operating symptoms of said equipment based upon
- 20 said compilation, said chart for use by said service provider, and said chart having sufficient information so said lay person does not need to have direct communication with said service provider when leaving said equipment with said service provider.

12 The method of claim 11 wherein said instantaneous operation of said actuator is based upon operation of said equipment as sensed by the five human senses of said lay persons and as said lay person operates said equipment.

13. The method of claim 12 including the step of:

instructing said lay person how to leave said equipment with said service provider, and how and when to claim said equipment following service of said equipment by said service provider.

14. The method of 13 including the step of:

capturing a signature of said lay person to provide authorization to said service provider.

15. An equipment operating condition recording device capable of
5 recording operating conditions substantially identical to operating conditions
during an abnormality sensed a lay person, comprising:

at least one actuator, the at least one actuator is responsive to an action
by a lay person;

at least one sensor to monitor at least one operating condition of the
10 equipment and to provide at least one output indicative of the at least one
operating condition being sensed; and

at least one memory for recording the at least one output,

such that when the at least one actuator is actuated by the lay person
during when the lay person senses the abnormality, the at least one memory
15 records the operating condition of the equipment

16. The device of claim 15, wherein the recorded operating
condition is the instantaneous operating condition.

20 17. The device of claim 15, wherein the at least one sensor is at
least two sensors

18. The device of claim 15, further comprising:

a read out module capable of downloading the recorded operating
25 conditions to a service site such that the service site can duplicate the
operating conditions that prompted the lay person to actuate the at least one
actuator.

19 The device of claim 18, wherein the read out module downloads
30 operating conditions to the service site using a protocol, the protocol
comprises at least one of wireless protocols, internet protocols, radio
frequency protocols, and telephony protocols.

20. A device for recording operating conditions of a piece of
35 equipment when a lay person senses an abnormality, comprising:
means for actuating at least one sensor, the means for actuating
responsive to an action of the lay person,
means for sensing the operating conditions of the piece of equipment;
means for storing the sensed operating conditions; and
40 means for downloading the stored operating conditions to a service
site, whereby the operating conditions of the piece of equipment when the lay
person sensed the abnormality can be substantially duplicated

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50